

221
14 an automatic beam limiter coupled to said window generator for generating
15 an analog window signal to said computer display, said beam limiter including a
16 limiter circuit to limit the upper values of said video amplifier; wherein said beam
17 limiter provides said analog window signal to control a gain control of said video
18 amplifier; said beam limiter limiting a beam current applied to said computer
19 display when said beam current exceeds a predetermined threshold value.

Cancel Claims 22-24 without prejudice.

REMARKS

The Examiner in the Official Action dated May 6, 1999, has rejected Claims 1-3, 11-13, 19 and 20 under 35 U.S.C. 102(e) as being anticipated by the newly cited Lee patent (5,555,026). Claims 4-10, 14-18, and 21-25 were rejected under 35 U.S.C. 103(a) as being unpatentable over said newly cited Lee patent in view of the newly cited Lagoni patent (5,204,748). Applicant has considerably restricted the number of Claims in this application to further the prosecution thereof. Claim 1 has been amended to include all the limitations of Claims 1-9, in addition to amendments to the claim for purposes of clarity and to include limitations that render it allowable over the art cited. Similarly, Claim 11 has been severely amended to include the recitations of Claims 11-18, as well as also including amendments to the claim for purposes of clarity, including limitations which render it, as well, allowable over the

art cited. Claims 19 and 20 were amended to include recitations that place them in condition for allowance too. Claim 21 was considerably amended also, and Claims 22- 25 were cancelled. By the above amendments and arguments submitted herein, Applicant submits that the present application now presents patentable subject matter and, accordingly, reconsideration and an early allowance of Claims 1, 10, 11, and 19-21 is earnestly and respectfully solicited.

Of the claims remaining in this application, Claims 1, 11, 19 and 20 were rejected as anticipated by the newly cited Lee patent (5,555,026) under 35 U.S.C. 102(e). Claims 10 and 21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of the newly cited Lagoni patent (5,204,748). Because all the claims herein have been considerably amended, Applicants will consider both patents in the remarks herein.

The Lee patent discloses a video state stabilization apparatus for use in a video display unit for displaying a sub-picture within a main picture. The patent further discloses preventing a brightness and/or contrast of a sub-picture from being influenced by a brightness and or contrast of a main picture, in which a separate signal for controlling an automatic beam limit of the sub-picture is created from a sub-video signal in order to use the sub-picture ABL control signal in the case of the sub-video signal, and to use to a main picture ABL control signal in the case of the main video signal. At column 6, line 54 of the Lee patent, it is stated that ". . . when the main picture signal is displayed on the screen, a brightness and/or

contrast are adjusted by main picture ABL control signal ABL_M . When the sub-picture signal is displayed, the brightness and/or contrast are adjusted by sub picture ABL control signal ABL_S ."

The Lagoni patent discloses a beam current limiting arrangement for a television receiver or monitor with provisions for displaying a small or auxiliary picture within a big or main picture within the same image, e.g., in a so-called picture-in-picture configuration. At column 5, line 26 of Lagoni it is stated that "in the television receiver shown in Fig. 1, a beam current limiting (BCL) section 41 monitors the average current drawn by the picture tube from high-voltage power supply 29 and, in response, generates control signals for reducing the contrast and brightness of the reproduced images when the beam current exceeds a predetermined threshold."

On the other hand, the present invention teaches a system and method for generating high luminance windows on a computer display device. As the application states, computer displays are usually of less contrast than a video display would be. So when a video is played, as from a CD-ROM or a DVD disk, a viewer would normally desire that the window in which the video is playing to have a higher brightness level than the background screen. This is completely different from the aims of both the Lee and Lagoni patents. These patents are drawn to television picture-in-picture systems where one video channel is in the background while another video channel is being displayed in a smaller screen

window. In the patents, when the background is dark, so will the smaller screen picture. When the screen is bright, so will the smaller screen picture. In order for the viewer to comfortably watch the screen, and not overload the screen display, one of the video pictures is brightened or darkened, while the other video picture is darkened or lightened in symmetry.

This is not the case with the present invention. Here we are concerned with only the smaller screen display being comfortably exhibited to a viewer, while the background screen remains the same. But, the present invention provides for an increased smaller window brightness, but not so much as to overload the screen display. This invention, relating to a computer display, is a clear distinction from picture-in-picture problems with standard television units. The claims as now presented in this case are clearly patentable over the art cited.

The present application teaches a system and method for generating high luminance windows on a computer display device, not a television set. In the preferred embodiment, the computer display includes a video amplifier, a window generator, a high-voltage power supply, an automatic beam limiter, and a cathode ray tube. In the preferred embodiment, the video amplifier receives a video signal, which includes information for presentation on the computer display. The video amplifier amplifies the received video signal and then applies the amplified video signal to the cathode of the CRT. The high-voltage power supply provides a high-voltage signal to the anode of the CRT. The CRT generates an electron beam, which

strikes the phosphor located on the inner surface of the viewing screen of the CRT. A processor device typically provides window control signals to the window generator in the computer display in response to a video application program running on a host computer system. The window control signals advantageously gate the generation of high luminance windows on the computer display, in accordance with the present invention. In the preferred embodiment, a limiter controls the beam current applied to said cathode ray tube in the computer display, with the limiter limiting the beam current when the beam current exceeds a predetermined threshold value.

As stated above, neither Lee nor Lagoni, taken singly or in combination, anticipate the problem solved by the Applicant herein. In fact, their solutions are not applicable in this invention as Applicant herein is not concerned with increasing the brightness of the background screen display when a video insert is played. Once a user had adjusted a computer display for comfortable viewing, it usually does not have to be altered. But when a video is played in a smaller screen, the brightness must be increased for comfortable viewing. Applicant's invention allows for this increased viewing brightness in the smaller screen, but the background view is not altered at all. This is an important difference in the invention set forth herein than that set forth in the cited patents.

Claim 1 of the present application now provides for a system for generating separate high-luminance viewing windows on a computer display device

comprising a control device coupled to said computer display device for processing input signals and providing said processed input signals to said computer display device, a window generator coupled to said computer display device for generating window information and applying said window information to said control device to generate said separate high luminance viewing windows on said computer display device; a limiter coupled to said computer display device for processing said window information to limit said input signals provided to said display device; a power supply, wherein said limiter samples the power supply to determine when to limit said input signals; a processor which provides control signals to said window generator, said control signals including selective position and size information for said high-luminance windows; said computer display device comprises a computer monitor including a cathode ray tube which receives said processed input signals; said control device comprises a video amplifier, and said input signals are video signals provided by said processor device; wherein said limiter provides said analog window signal to control a gain control of said video amplifier; said limiter controlling a beam current applied to said cathode ray tube in the display device; and said limiter limiting said beam current when said beam current exceeds a predetermined threshold value.

Claim 11 similarly discloses a method for generating individual high-luminance viewing windows on a display device, comprising the steps of: processing input signals using a control device coupled to said display device;

providing said processed input signals to said display device; generating window information using a window generator coupled to said display device; applying said window information to said control device to generate said high-luminance viewing windows on said display device; wherein said window information includes a window pulse; processing said window pulse to limit said input signals using a limiter coupled to said display device; and further comprising a power supply; wherein said limiter samples the power supply to determine when to limit said input signals, and a processor device which provides control signals to said window generator, said control signals including selective position and size information for said high-luminance windows; wherein said display device is a computer monitor including a cathode ray tube which receives the processed input signals and displays and high-luminance windows; said control device is a video amplifier and said input signals are video signals provided by said processor device; said limiter receives and limits said window signal to generate and provide an analog window signal to said video amplifier; wherein said limiter provides said analog window signal to control the gain of said video amplifier; said limiter controlling a beam current applied to said cathode ray tube in said display device; and said limiter limiting said beam current when said beam current exceeds a predetermined threshold value.

Claims 19 and 20 are similarly amended to include where the window pulses are limited when said processed input signals exceed a predetermined threshold value. Claim 21 has also been severely amended and includes language that an automatic beam limiter is coupled to said window generator for generating an analog window signal to said computer display, said beam limiter including a limiter circuit to limit the upper values of said video amplifier; wherein said beam limiter provides said analog window signal to control a gain control of said video amplifier; said beam limiter limiting the beam current applied to said computer display when said beam current exceeds a predetermined threshold value.

None of references cited either singly or in combination anticipate Applicant's present invention and his solution to an existing problem. Accordingly, Applicant submits that Claims 1, 10, 11, and 19-21 in the present application now present patentable subject matter over the references of record and, accordingly, an early allowance of the present application is earnestly and respectfully solicited.

Respectfully submitted,

Richard D. Cappels

By: Franklyn C. Weiss

Franklyn C. Weiss
Attorney for Applicant
Reg. No. 23,041

Carr & Ferrell LLP

2225 East Bayshore Road, Suite 200
Palo Alto, CA 94303
Tel.: 650-812-3473
Fax: 650-812-3444